A COATING USED TO CONVERT OR DESTROY OZONE [EINE ZUR OZONUMWANDLUNG ODER ZERSTÖRUNG DIENENDE BESCHICHTUNG]

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The invention relates to a porous coating that contains a catalyst that converts ozone (that develops during photo-oxidation with nitrogen oxides and hydrocarbons) into  $O_2$  by contact at normal daytime temperature and thus interrupts the reaction chain of the photo-oxidation. In this process the catalyst is not used up.

Ozone develops due to the effect of UV light on nitrogen oxides that react further with the hydrocarbons contained in the air and produce further poisonous ozone.

Ozone is a strong respiratory poison, which especially damages trees. To date there was nothing that could be done to prevent this and it was only possible to wait until a lack of UV light (clouds, night) prevented the formation of ozone.

$$NO_1$$
  $\xrightarrow{UV}$   $NO + O$   
 $O + O_2$   $\longrightarrow$   $O_3$ 

 ${\rm Cu}_2{\rm O}$  or CuO or a mixture of the two is mixed with a binder that results in a water-resistant but porous coating. This coating converts poisonous ozone molecules directly into non-poisonous oxygen molecules. This coating can also be mixed with various pigments, as long as the catalyzing portion is in excess and the coating remains porous. In this way, any colors can be obtained.

This coating can be applied to walls, buildings, fences, the underbodies of vehicles, road barriers and carpets. It can also be worked into the coverings of roadways. Since most of these objects lie close

<sup>\*</sup> Numbers in the margin indicate pagination in the foreign text.

to vehicles that produce pollutants, ozone that develops due to photo-oxidation is broken down catalytically.

The advantage achieved lies in that poisonous ozone is transformed into oxygen and the chain of photo-oxidation (smog formers) is interrupted.

## Claims

- 1. A coating used for ozone conversion or destruction.
- 2. A catalyst of  $\text{Cu}_2\text{O}$ , CuO or a mixture of the two that is mixed with a gas-permeable binder.